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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,529	09/30/2003	Jerrell Hein	026-0036	6093

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EXAMINER

FRANKLIN, RICHARD B

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

6

Office Action Summary	Application No. 10/675,529	Applicant(s) HEIN, JERRELL	
	Examiner Richard Franklin	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/07/04, 08/18/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 21 have been examined.

Claim Objections

2. Applicant is advised that should claim 3 be found allowable, claim 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claim 20 recites the same limitation as claim 3 and is dependent upon the same parent claim.

3. Applicant is advised that should claim 4 be found allowable, claim 21 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claim 21 recites the same limitation as claim 4 and is dependent upon the same parent claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 9, 11 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torode US Patent No. 5,451,912 (hereinafter Torode) in view of Novac et al. US Patent No. 6,930,917 (hereinafter Novac).

As per claims 1 and 19, Torode teaches an apparatus comprising a terminal (Torode; Figures 1 – 2). Torode also teaches wherein the Output Disable (OD) terminal has two modes of operation. In the first mode, the terminal is used as a programming terminal that accepts serial data that determines the operation of the apparatus (Torode; Col 4 Lines 15 – 19). In the second mode, the terminal is used as an output enable terminal that enables output from the apparatus determining on the voltage on the terminal (Torode; Col 3 Lines 25 – 31). Torode also teaches wherein the mode change is permanent as apparatus programming is a one-time event (Torode; Col 3 Lines 41 – 45).

Torode does not teach control circuitry coupled to the terminal that converts the terminal from the first mode of operation to the second mode of operation.

Novac teaches an output terminal that is used as a serial input terminal that includes circuitry for converting it from a first mode to a second mode (Novac; Figure 3, Col 5 Lines 48 – 54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Torode to include the switching circuitry of Novac because it allows for a reduced number of terminals to be required (Novac; Col 1 Line 62 – Col 2 Line 8).

As per claim 2, Torode also teaches wherein once the terminal is converted to the second mode of operation, the terminal function cannot be converted into the first dedicated mode of operation (Torode; Col 3 Lines 41 – 45).

As per claims 3, 13, and 20, Torode also teaches wherein a terminal configuration determining the mode of operation of the terminal is stored in a non-volatile memory (Torode; Figure 7 Item 740, Col 6 Lines 56 – 60).

As per claims 4, 14, and 21, Novac also teaches wherein the control circuit is responsive to communications received over the terminal in the first mode to convert the terminal into the second mode of operation (Novac; Col 11 Lines 4 – 12, CLOSELOCK_n). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Torode by those of Novac for the same reasons as set forth in the rejection of claim 1.

As per claims 5 and 15, Torode also teaches wherein the serial communication received over the terminal in the first mode includes a command and write data (Torode; Figure 9).

As per claims 6 and 16, Torode also teaches wherein the control logic distinguishes between a calibration clock and a serial communication received on the terminal (Torode; Col 8 Lines 17 – 20).

As per claims 7 and 17, Torode also teaches wherein the output enable function is for controlling the output of one or more clocks according to the voltage value of the terminal (Torode; Col 3 Lines 26 – 31).

As per claim 8, Torode also teaches wherein a controllable oscillator is coupled to receive a reference frequency and to supply a clock signal that is coupled to an output terminal that is controlled by the output enable terminal (Torode; Col 5 Lines 23 – 33); and a resonating device coupled to supply the reference frequency (Torode; Figures 2 – 4 Item 220).

As per claim 9, Torode also teaches wherein the terminal is on a package (Torode; Figure 1 Item 100, Col 2 Line 64 – Col 3 Line 25), the package including an integrated circuit (Figure 2 Item 210) and a resonating device (Torode; Figures 2 – 4 Item 220), the integrated circuit including the controllable oscillator (Torode; Figure 5

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Item 560), and the resonating device being a crystal device (Torode; Figures 2 – 4 Item 220, Col 3 Lines 38 – 51).

As per claim 11, Torode teaches an apparatus comprising a terminal (Torode; Figures 1 – 2). Torode also teaches wherein the Output Disable (OD) terminal has two modes of operation. In the first mode, the terminal is used as a programming terminal that accepts serial data that determines the operation of the apparatus (Torode; Col 4 Lines 15 – 19). In the second mode, the terminal is used as an output enable terminal that enables output from the apparatus determining on the voltage on the terminal (Torode; Col 3 Lines 25 – 31).

Torode does not teach control circuitry coupled to the terminal that converts the terminal from the first mode of operation to the second mode of operation in response to a received command.

Novac teaches an output terminal that is used as a serial input terminal that includes circuitry for converting it from a first mode to a second mode in response to a command (Novac; Figure 3, Col 11 Lines 4 – 12, CLOSELOCK_n).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Torode to include the switching circuitry of Novac because it allows for a reduced number of terminals to be required (Novac; Col 1 Line 62 – Col 2 Line 8).

As per claim 12, Torode also teaches wherein the mode conversion is permanent as the apparatus programming is a one-time event (Torode; Col 3 Lines 41 – 45).

As per claim 18, Torode also teaches wherein the terminal is on a package, the package including an integrated circuit and a resonating device, the resonating device being one of a crystal device (Torode; Figure 1 Item 100).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Torode US Patent No. 5,451,912 (hereinafter Torode) in view of Novac et al. US Patent No. 6,930,917 (hereinafter Novac) as applied to claims 1 – 9 and 11 – 21 above in further view of Fallisgaard et al. US Patent No. 6,664,860 (hereinafter Fallisgaard).

As per claim 10, Torode in view of Novac teach the apparatus as described per claim 1 (See rejection of claim 1 above). Torode in view of Novac also teaches wherein a terminal receives serial communications and a calibration clock (Torode; Col 8 Lines 17 – 20).

Torode in combination with Novac does not teach wherein the apparatus comprises a second terminal that functions as a dedicated programmable input/output terminal.

Fallisgaard teaches a programmable crystal oscillator with a dedicated programming input terminal (Fallisgaard; Figure 1 Item 22) that does not get converted into an output enable terminal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Torode in combination with Novac to include the dedicated programming terminal because it allows for customer data to be entered into the device (Fallisgaard; Col 3 Lines 17 – 23).

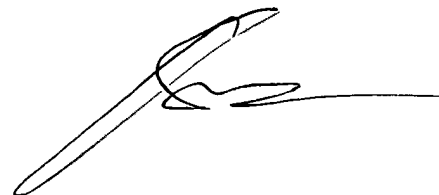
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard Franklin
Patent Examiner
Art Unit 2181



KIM HUYNH
SUPERVISORY PATENT EXAMINER

2/23/15